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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/826,988

04/19/2004

Ken Shiozaki

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1218

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10/01/2007

CASELLA & HESPOS
274 MADISON AVENUE
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EXAMINER

BERTHEAUD, PETER JOHN

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

10/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/826,988	Applicant(s) SHIOZAKI ET AL.	
	Examiner Peter J. Bertheaud	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/13/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the amendments of 9/13/2007. It is noted that claims 1 and 3 have been amended.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiozaki 6,550,596.
4. Shiozaki teaches a control method of an external control system fan clutch wherein the interior of a sealing housing 2 constructed by a case of a non-magnetic material supported through a bearing 13 on a rotating shaft body 1 fixedly attaching a drive disk 3 to its tip and a cover 2-2 attached to this case is partitioned into an oil reservoir chamber 5 and a torque transmission chamber 6 for internally mounting said drive disk 3 by a partition plate 4; a dam 15 is arranged in one portion of the inner circumferential wall face of the cover opposed to the outer circumferential wall portion of the drive disk 3 for collecting and reservoiring oil at the rotating time, and a valve member 9 having a magnetic property and being arranged within the oil reservoir

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chamber, the valve member closing an oil circulating flow passage formed between the torque transmission chamber 6 and the oil reservoir chamber 5 is connected to the dam 15 and is arranged within the oil reservoir chamber 5; an electromagnet 11 is supported by said rotating shaft body 1 through the bearing 14 on the oil reservoir chamber 5 side of said sealing housing, and a mechanism for controlling the opening and closing of the oil circulating flow passage is constructed by operating the electromagnet 11; and the external control type fan clutch is constructed by a system for controlling rotating torque transmission from the drive side to the driven side by increasing and decreasing an effective contact area of the oil in a torque transmission clearance portion formed by the drive side and the driven side (see col. 2, lines 16-27); wherein the opening and closing of said valve member could be controlled on the basis of a plurality of signals selected from the cooling liquid temperature of a radiator, a fan rotating speed, the temperature of transmission oil, a vehicle speed, an engine rotating speed, the pressure of a compressor of an air conditioner, and a turning-on or turning-off signal of the air conditioner (see col. 1, lines 6-11, and 47-53). Although not explicitly stated, it is obvious that the apparatus of Shiozaki is capable of performing a method wherein an upper limit rotating speed is set to an optimum fan rotating speed required from the engine side (see col. 10, lines 14-23); a fan rotating speed control signal is temporarily stopped on the basis of the differential speeds between an engine rotating speed, the fan rotating speed and said optimum fan rotating speed; the fan rotating speed control signal is temporarily stopped on the basis of an engine rotating acceleration or an accelerator (throttle) position acceleration; or a limit is given to a changing rate of the

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optimum fan rotating speed on the basis of the changing rate of said optimum fan rotating speed; and, wherein a magnetic material of a ring shape 11-1 is arranged between said electromagnet and the valve member, and is constructed by assembling the magnetic material into the sealing housing so as to transmit a magnetic flux of the electromagnet to the valve member through the magnetic material (see col. 5, lines 13-27).

Shiozaki discloses the claimed invention except for the electromagnet attracting the valve member and deflecting the valve member away from the oil circulating flow passage. It would have been obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to by-pass the use of the permanent magnet in Shiozaki and opening the flow passage by actuating the electromagnet instead of closing it, since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

Response to Arguments

5. Applicant's arguments filed 9/13/2007 have been fully considered but they are not persuasive. Applicant's arguments with respect to claim 1, particularly the portion describing the function of the valve and electromagnet, have been considered but are moot in view of the new ground(s) of rejection.

6. In response to Applicant's argument with respect to the basis on how the fan is controlled: Applicant argues that Shiozaki "controls the fan speed merely by a single face, i.e. and engine rotating speed" and that the amendment to claim 1 is not taught or

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suggested by the Shiozaki reference. Examiner respectfully disagrees in column 1, lines 6-11, Shiozaki states, "The present invention generally relates to externally controlled fan coupling devices for controlling the rotation speed of a fan for cooling an engine of an automobile or the like in accordance with changes in the ambient temperature or changes in the rotation." Changes in the ambient temperature could be a result of many things including the cooling liquid temperature of a radiator, the temperature of transmission oil, a vehicle speed, an engine rotating speed, the pressure of a compressor of an air conditioner, and a turning-on or turning-off signal of the air conditioner. Furthermore, in column 1, lines 47-53, Shiozaki goes on to say that "controlling factors such as the water temperature, the engine speed, and auxiliary devices such as an air conditioner can be arbitrarily selected". In addition, in column 9, lines 63-67, Shiozaki states that "the fan rotating speed can be controlled by opening and closing the valves to achieve an arbitrary rotating speed as specified by providing feedback of fan rotating speeds". Finally, in column 1, lines 54-63, it is stated that "it is an object of the invention to provide an externally controlled fan coupling device which has a simple mechanism to allow saving of power consumption...which can freely and properly control the rotation speed of a fan by accurately adjusting the amount of oil in accordance with various operating conditions." Therefore, it would have been obvious that the opening and closing of said valve member could be controlled on the basis of a plurality of signals selected from the cooling liquid temperature of a radiator, a fan rotating speed, the temperature of transmission oil, a vehicle speed, an engine rotating

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speed, the pressure of a compressor of an air conditioner, and a turning-on or turning-off signal of the air conditioner. Thus, the reference reads on claim 1.

7. In response to Applicant's argument that there is nothing in Shiozaki that would motivate a skilled artisan to set an upper limit rotating speed "to an optimum fan rotating speed required from the engine side; a fan rotating speed control signal is temporarily stopped on the basis of the differential speeds between an engine rotating speed, the fan rotating speed and said optimum fan rotating speed; the fan rotating speed control signal is temporarily stopped on the basis of an engine rotating acceleration or an accelerator (throttle) position acceleration; or a limit is given to a changing rate of the optimum fan rotating speed on the basis of the changing rate of said optimum fan rotating speed": Examiner maintains that with the structure of the prior art being almost identical to that of the present application, and in light of the arguments regarding how the fan is controlled, that Shiozaki does indeed teach that his assembly is capable of performing the method in question (see col. 10, lines 14-23). In response to the limitation "an upper limit rotating speed is set to an optimum fan rotating speed required from the engine side": Shiozaki teaches that "the fan rotating speed can be kept at an upper limit value while the engine rotating speed is changing"; therefore, this upper limit could be an optimum value at some point, thus reading on the limitation. In response to the limitations "a fan rotating speed control signal is temporarily stopped on the basis of the differential speeds between an engine rotating speed, the fan rotating speed and said optimum fan rotating speed....or a limit is given to a changing rate of the optimum fan rotating speed on the basis of the changing rate of said optimum fan rotating

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speed”: Shiozaki teaches that “the fan rotation can be controlled and adjusted to any rotating speed from the off state to on state and from the on state to the off state with the rotating speed of the engine kept constant”; therefore, the fan will be controlled as needed by the factors talked about previously (whether that be stopping the fan rotating control signal or placing a limit on a changing rate of optimum fan rotating speed), encompassing these control characteristics within this method; thus the reference reads on the limitations. In response to the limitation “the fan rotating speed control signal is temporarily stopped on the basis of an engine rotating acceleration or an accelerator (throttle) position acceleration”: Since Shiozaki teaches that a controlling factor of the fan rotating speed will be engine speed, then there it would be obvious that engine acceleration, which affects engine speed, could be the basis for temporarily stopping the fan rotating speed control signal; thus the control signal reads on the limitation. Finally, the “or” placed in the above limitations (see “....acceleration; or a limit is given...”) indicates that only one of the method limitations in question needs to be met in order to read on the claim. Nevertheless, the reference reads on the claims.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J. Bertheaud whose telephone number is (571) 272-3476. The examiner can normally be reached on M-F 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Stashick can be reached on (571) 272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


PJB

9/21/07



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